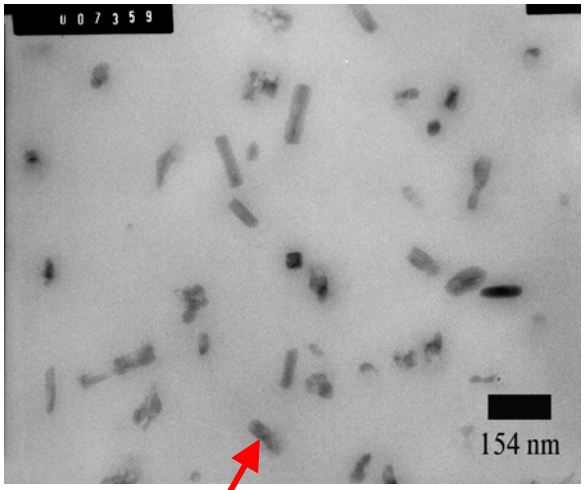
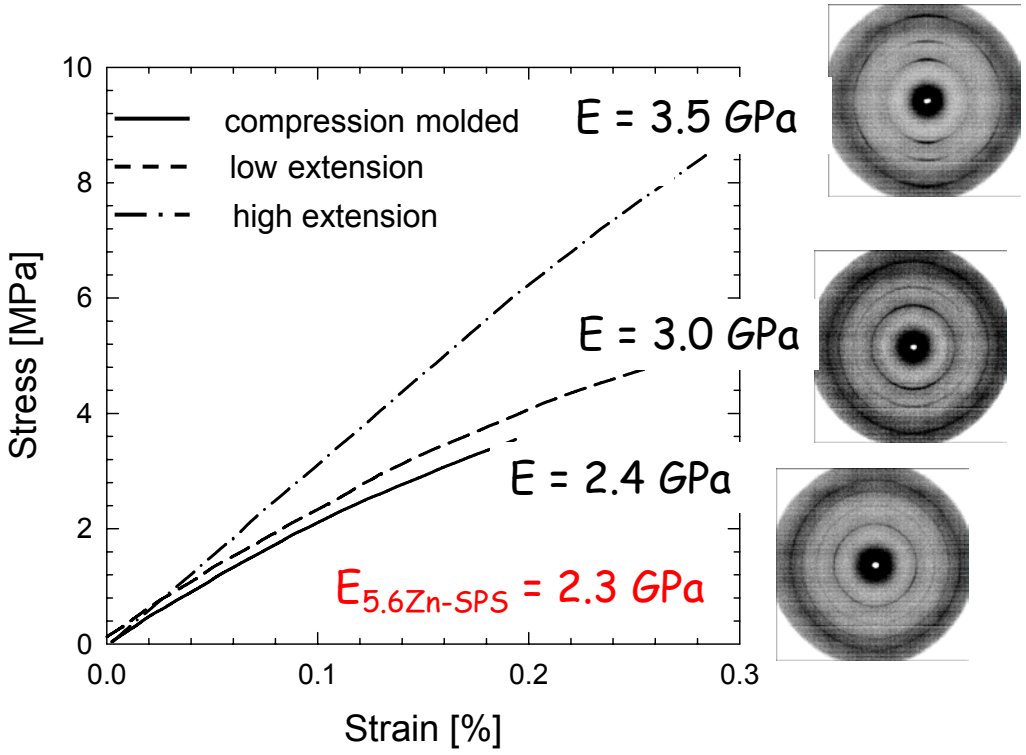
NER: Nano-Composites Derived from Melt Blending an Ionomer and a Thermotropic Liquid Crystalline Polymer (TLCP)

R. A. Weiss, Univ. of Connecticut, DMR-0303696



TLCP Nanoparticles formed during melt compounding with sulfonated polystyrene ionomer at 300°C



TLCP nanoparticles are easily oriented in an extensional flow and provide reinforcement comparable to short fibers with E > 25 GPa

***Polymer**, submitted, 2004*

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Education:

One Ph.D. candidate, Mr. Hyuk-soo Lee (4th year) and a postdoctoral research associate, Dr. Byeongyeol Kim were supported by this grant. A visiting scientist, Mr. Dani Fishman also was involved with this research.

Outreach:

The PI and his students participated in an Open House and Visitation Day during the Fall, 2003 and Spring, 2004 for college seniors interested in graduate school in which the students were shown demonstrations of how polymer science impacts on contemporary technology. The PI also edited a children's book on polymeric materials: *'Fantastic Plastics'*, Newbridge Publ., NY. 2003.